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## EMBARGOED FOR PUBLICATION NOVEMBER 14TH Californians Spend Less on Electricity, Save Billions More than Rest of Country Due to Green Innovation

## CA Inventors Win 44 Percent of All U.S. Solar, 37 Percent Wind Patents New Index Tracks VC Green Tech Investment, Patents, Job Growth

Palo Alto, CA – Statistics released today in the inaugural "*California Green Innovation Index*" run counter to conventional wisdom and paint a different picture of California's economic history and future than previously reported. Despite the State's reputation for high electricity costs, Californians, per capita, pay lower utility bills and spend billions less of their state economy as a whole on electricity than the rest of the country due to energy efficiency innovation, according to Index data. As a fraction of a state's gross domestic product, the Texas electricity bill is almost double the California in 2005 alone. The Index finds that California may be on the verge of a significant leap in innovation, with skyrocketing green tech venture capital investment, acquisition of clean tech patents, growth of green businesses and jobs and overwhelming public support for action and new state policy.

The "*California Green Innovation Index*" (www.next10.org) is an initiative of Next 10, a nonpartisan, nonprofit organization, founded and funded by venture capitalist F. Noel Perry. Designed to track key economic, energy and environmental indicators, the Index provides critical data on the impact of innovation on the state's economic and environmental health as California moves to reduce greenhouse gas (GHG) emissions to 1990 levels as mandated by the California Global Warming Solutions Act (AB 32). A PDF of the Index can be found at: http://nextten.org/pressreleases/NextTen-2z.pdf <http://nextten.org/pressreleases/NextTen-2z.pdf>

"As a venture capitalist, I recognize the challenges presented by global warming and the economic opportunities provided by AB 32. But whether we maximize those opportunities is dependent upon how this law is implemented. We developed the Index to gauge progress and uncovered some surprising trends," said Perry. "Over the past thirty years, California has been on a different path than the rest of the nation and the world. Through innovation, California has become a global leader in energy efficiency and the reduction of greenhouse gas emissions, which, contrary to conventional wisdom, has helped it grow one of the largest economies in the world."

Chief among Index findings:

- As a result of the first wave of green innovation, which began in the 1970s, it comes as no surprise that California is more energy efficient and emits fewer greenhouse gas emissions per capita than the United States as a whole. However, California also emits fewer GHG emissions per capita than Germany, the United Kingdom or Japan.
- With the eighth largest economy in the world and one of the nation's highest gross domestic products per capita, California's per capita GHG emissions are less than one-half the rest of the nation and are lower than they were 15 years ago. Among states, only Rhode Island emits fewer GHG emissions per capita than California.
- Green innovation, combined with other factors, allow Californians to spend less on electricity and have more to spend on other parts of the economy than the rest of the nation. (Chart 7)
- The average monthly residential electricity bill in California is less than half of the average monthly bill in Texas, representing a total savings for Californians of nearly \$25 billion in 2005. As a fraction of the state economy, Texas' overall electricity bill is almost double California's bill. (Charts 7 and 8)
- California building and appliance standards alone have saved \$56 billion through 2003 and are expected to save another \$23 billion by 2013.
- California utility programs and efficiency standards have reduced the need for 24 power plants between 1975 and 2006.
- California has established itself as a world leader in green innovation. California inventors account for 44 percent of total US patents for solar and 37 percent of total U.S. patents for wind

technology. The state attracted 36 percent of total venture capital investment in clean energy, indicating our state's leadership in the innovation of new technologies. (Chart 34)

- Since 1990, green business establishments in the state have grown by 84 percent and employment has doubled. Growth in green establishments has been strongest in solar energy generation. (Chart 39)
- California has fewer vehicle miles traveled (VMT) per capita than the rest of the country. While per capita VMT in the rest of the country has grown consistently since 1995, in California per capita VMT has declined in recent years, and is only slightly higher than in 1995. (Chart 21)
- From 2000-2005, registrations of alternative fuel vehicles (not including Flex Fuel Vehicles or FFV) increased 1800 percent. (Chart 30)
- Per capita petroleum consumption in California has fallen consistently since 1989 and is now below 1970 levels. (Chart 18)

The Index identifies drivers critical to California's first wave of innovation including public policy, private investment and consumer attitude, and presents indications that similar drivers are at work today. Since the passage of AB 32, clean tech venture capital investments have exploded in California, more than doubling from \$364 to \$884 million last year alone, accounting for the largest share of US venture capital.

To better understand consumer attitude in California, Next 10 commissioned a Field Poll, which was released November 8th. Survey results depict a citizenry more informed, concerned and ready to take action on global warming than the rest of the United States. The Index contains additional new survey results indicating an appreciation of California's role in innovation: 85 percent of Californians agree the state can reduce greenhouse gases that contribute to global warming and, at the same time, expand jobs and economic prosperity. 77 percent agree that firms and government researchers will develop new technologies to combat the problem of global warming. 90 percent of Californians believe California can be a leader in new technologies to improve efficiency and reduce global warming. (66 percent agree strongly.)

While many of the Index findings illustrate the opportunities innovation can bring to the state, the Index also underscores the challenges that lie ahead:

- While California has made enormous progress, the state's rate of population growth and impacts on fuel and electricity consumption and greenhouse gas emissions require that the next wave of innovation be larger, faster and more powerful than the last to meet the mandate of AB 32. (Chart 44)
- While certain industries in the commercial business sector have made dramatic improvement in energy efficiency (restaurants, hotels, retail, food stores), others (schools, colleges, hospitals, warehouses) have continued to increase energy consumption. (Chart 17)
- While Californians, per capita, are increasingly driving fewer miles per vehicle than the rest of the country, overall vehicle miles traveled continue to grow. With nearly 41 percent of California's GHG emissions coming from the transportation sector, reducing GHG emissions per vehicle is critical to reaching the mandate of AB 32. (Chart 21 and 20)
- While a greater percentage of Californians use more alternative means of commute than the rest of the U.S., that percentage dropped from 2000 to 2005. (Chart 23)
- While California has registered more green technology patents than other states, foreign inventors are registering more patents than U.S. inventors.
- Federal green technology research and development monies to California have declined precipitously over the last ten years, falling from \$7.8 million in 1997 to \$410,000 in 2006. (Chart 32)
- California has only 900 alternative fuel filling stations, located primarily in the Bay Area and Southern California. (Page 39)
- California's water system accounts for approximately 20 percent of the State's gross electricity use and has significant inefficiencies.

"The Index data makes it clear that California will need to move farther faster if it is to successfully meet the targets set by AB 32," said Doug Henton of Collaborative Economics, a Silicon Valley-based firm that prepared the Index for Next 10, "But the data also indicates we may be at an inflection point between the first wave and a new wave of green innovation."

California Air Resources Board (CARB) chair Mary Nichols commented, "I am very encouraged that the California Green Innovation Index will be a powerful tool to track the valuable lessons learned as California makes history meeting the mandate of AB 32." The Next 10 "*California Green Innovation Index*" identifies and tracks over 40 data indicators drawn from state and federal agency sources, academic institutions and proprietary databases. In coming years, the Index plans to develop indices and track data on regional performance, as well as the impacts of policy. The Index was produced in partnership with Collaborative Economics, a Mountain View, California-based research and consulting organization that works with senior executives from business, foundations, government, education and community sectors to identify economic, environmental and social trends and promote regional innovation. For over a decade, Collaborative Economics has prepared the annual Index of Silicon Valley for Joint Venture: Silicon Valley Network.

Next 10 is an independent, nonpartisan organization that educates, engages and empowers Californians to improve the state's future. Next 10 is focused on innovation and the intersection between the economy, the environment and quality of life issues for all Californians. Next 10 employs research from leading experts on complex state issues and creates a portfolio of nonpartisan educational materials to foster a deeper understanding of the critical issues affecting our state. On November 14, Next 10 is launching an updated website, www.next10.org <<u>http://www.next10.org</u>> . This dynamic new site houses an online digest of the core findings contained in the California Green Innovation Index, and includes video clips and animated graphics.

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